

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Application No.: 10/630,751
Attorney Docket No.: Q71391

REMARKS

The Office Action of November 29, 2005 has been received and its contents carefully considered.

Claims 1 to 12 are all the claims pending in the application, prior to the present amendment.

The Examiner has indicated that claims 2, 3, 10 and 12 contain allowable subject matter, and would be allowed if rewritten in independent form.

Claims 1, 4-9 and 11 have been rejected under 35 U.S.C. § 103(a) as obvious over US Patent 6,670,055 to Tomiyasu et al in view of US Patent 6,777,066 to Chang et al.

Applicants submit that Tomiyasu et al and Chang et al do not disclose or render obvious the subject matter of claims 1, 4 to 9 and 11 as amended above and, accordingly, request withdrawal of this rejection.

The Examiner states that Tomiyasu et al disclose a CrMnC non-magnetic layer with a CoPt-alloy magnetic layer directly thereon and a protective overcoat. The Examiner states that the CrMnC layer corresponds to the claimed orientation control layer because it necessarily controls the orientation of the magnetic layer that is epitaxially grown thereon.

The Examiner further states that Tomiyasu et al disclose an example of a CrMnC non-magnetic layer between magnetic layers, wherein the thickness of the CrMnC layer is 3 nm. The Examiner refers to column 11, lines 10-46. See also column 11, lines 2 to 9.

The Examiner acknowledges that the upper pre-coat layer taught by Tomiyasu et al which is the layer that she had been relying upon for the disclosure of a CrC layer, does not

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Application No.: 10/630,751
Attorney Docket No.: Q71391

disclose the invention as set forth in the present claims. The Examiner now asserts that Tomiyasu et al disclose the use of a second CrC containing layer, namely, the CrMnC layer, which is in direct contact with an overlying magnetic layer. The Examiner, therefore, states that she is maintaining the rejection with respect to claims 1, 4-9 and 11.

The CrMnC layer that the Examiner now refers to is described at column 6, lines 28-38, which sets forth a description of the magnetic layer as having a multilayer constitution. Tomiyasu et al state that the magnetic layer having a multilayer constitution is formed by dividing a magnetic film by a non-magnetic film, which according to Tomiyasu et al can be a CrMnC film.

Thus, the CrMnC film described in Tomiyasu et al is one layer of a multilayer magnetic film, and is present between two hard magnetic layers of the multilayer magnetic layer.

The Tomiyasu et al patent does not disclose an invention Example having a CrMnC film. Tomiyasu et al disclose a CrMnC film in a Comparative Example. Thus, the example which the Examiner cites at column 11 is a Comparative Example, in which the CrMnC is present between two hard magnetic layers.

Applicants have amended claim 1 to state that the soft magnetic under-film is in direct contact with the orientation control film. Tomiyasu et al and Chang et al do not disclose or suggest the structure set forth in claim 1 in which an orientation control film containing Cr and C is in direct contact with a soft magnetic under-film and a perpendicular magnetic recording film. Applicants note that they have also amended the last word of claim 1 to make it consistent with the remainder of the claim.

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Application No.: 10/630,751
Attorney Docket No.: Q71391

Further, applicants have added a new set of claims 13 to 17 directed to the embodiment in which an intermediate layer is present between the perpendicular magnetic film and the orientation control film, wherein the orientation control film is in direct contact with the intermediate layer which is in direct contact with the perpendicular magnetic layer. Support for claim 13 can be found, for example, in paragraph [0045], the Examples and drawings. Support for new claims 14 and 15 also can be found in paragraph [0045] of the specification. Support for new claims 16 and 17 can be found in paragraph [0039] of the specification.

Applicants submit that Tomiyasu et al and Chang et al do not disclose or suggest the invention set forth in claims 13 to 17.

In view of the above, applicants submit that Tomiyasu et al and Chang et al do not disclose or suggest the subject matter of claims 1, 4 to 9 and 11 as amended above or the subject matter of new claims 13 to 17 and, accordingly, request withdrawal of this rejection.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Application No.: 10/630,751
Attorney Docket No.: Q71391

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

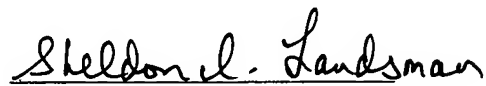
Respectfully submitted,

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE

23373

CUSTOMER NUMBER



Sheldon I. Landsman
Registration No. 25,430

Date: February 28, 2006